# APPROVAL OF OU 1 FEASIBILITY STUDY/PROPOSED PLAN REPORTS

07/27/94

USEPA DOE-FM 7 COMMENTS

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#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

#### REGION 5 77 WEST JACKSON BOULEVARD CHICAGO, IL 60604-3590

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REPLY TO THE ATTENTION OF:

HRE-8J

Mr. Jack R. Craig United States Department of Energy Feed Materials Production Center P.O. Box 398705 Cincinnati, Ohio 45239-8705

RE: Approval of OU-1

Feasibility Study/Proposed Plan

Reports

Dear Mr. Craig:

The United States Environmental Protection Agency (U.S. EPA) has completed its review of the United States Department of Energy's (U.S. DOE) revised Operable Unit (OU) 1 Feasibility Study (FS)/Proposed Plan (PP) reports. The FS/PP reports have adequately addressed the majority of U.S. EPA's comments.

Therefore, U.S. EPA hereby approves the FS/PP Reports pending incorporation of the attached comments. U.S. DOE must incorporate the attached comments and submit change pages to the FS/PP reports within thirty (30) days receipt of this letter.

Please contact me at (312) 886-0992 if you have any questions.

Sincerely,

Yames A. Saric

Remedial Project Manager

Technical Enforcement Section #1

RCRA Enforcement Branch

Enclosures

cc: Tom Schneider, OEPA-SWDO

Pat Whitfield, U.S. DOE-HDQ

Don Ofte. FERMCO

Jim Thiesing, FERMCO

Paul Clay, FERMCO

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U-003-407, 11

## TECHNICAL REVIEW COMMENTS ON THE DRAFT FINAL OPERABLE UNIT 1 FEASIBILITY STUDY (REVISION 1)

#### GENERAL COMMENTS

Commentor: Saric Commenting Organization: U.S. EPA Pg. #: NA Line #: NA Section #: All Original General Comment #: 70 (U.S. EPA Comment # 4) The original comment recommends using consistent Comment: terminology when discussing long-term effectiveness of onsite disposal alternatives. The text in several sections has been revised to consistently state that these alternatives will be designed to maintain integrity for up to 1,000 years. However, the text should also discuss criteria set forth in 40 Code of Federal Regulations (CFR) 192.02(a), which states that the integrity of such units should be maintained for up to 1,000 years and for at least 200 years.

#### SPECIFIC COMMENTS

Commentor: Commenting Organization: U.S. EPA Line #: 3 through 7 Section #: 2.2.4 Pg. #: 2-55 Original Specific Comment #: 85 (U.S. EPA Comment # 8) Comment: The original comment recommends the resolution of discrepancies between examples presented in this paragraph and the data presented in Table 2-14. These apparent discrepancies remain in the draft final report. For example, the text states that uranium-238 is a secondary driver of remediation levels in Waste Pits 4 and 5. However, the data presented in Table 2-14 indicates that neptunium-237 is apparently a secondary driver at Waste Pit 5, and uranium-238 is a secondary driver at Waste Pits 1 and 4. These discrepancies should either be resolved or explained.

Commenting Organization: U.S. EPA Commentor: Saric Section #: D.3.4.1 Page #: D-3-19 Line #: NA Original Specific Comment #: 142 (U.S. EPA Comment #19)
Comment: The original comment requests that the text be revised to indicate where the nonremediation worker and off-site individual were assumed to be located. In response, the U.S. Department of Energy (U.S. DOE) added receptor distances for the nonremediation worker of 200 meters (m) and for the off-site individual of 400 m. The reference for both of these distances was "assumed." In fact, these distances should not be assumed. Rather, air modeling should be conducted to identify the location at which a

nonremediation worker and off-site individual would receive the greatest exposure. Appendix D should be revised to locate the nonremediation worker and off-site individual at the points where these receptors would receive the greatest exposure. Table D.3-1 should also be revised to clarify that the receptor distances "assumed" for the nonremediation worker and the off-site worker are based on the results of air modeling.

Commenting Organization: U.S. EPA Commentor: Saric Section #: D.7.0 Page #: D-7-1 Line #: 20 and 21 Original Specific Comment #: 160 (U.S. EPA Comment #37)
Comment: The original comment requests that the text be revised to refer correctly to the table or tables containing exposure point concentrations for the residual risk evaluation. In response, U.S. DOE has changed the text to refer to Table D.5-7, which contains air exposure point concentrations. This response is incomplete. The text should be revised to also refer to Tables D.5-6 and D.5-8, which contain surface soil exposure point concentrations and preliminary remediation goals for groundwater, respectively.

Commenting Organization: U.S. EPA Commentor: Saric Page #: D-7-2 Line #: 28 and 29 Section #: D.7.0 Original Specific Comment #: 161 (U.S. EPA Comment #38) Comment: The original comment notes a discrepancy between the text, which states that exposures to volatiles in groundwater were evaluated for the ingestion and dermal contact pathways, and Table/Figure D.3-1, which also includes the inhalation of volatiles as a pathway. has responded by stating that Table/Figure D.3-1 shows potential pathways and references Table D.3-5 to support the conclusion that inhalation of volatiles from groundwater is not a viable pathway. However, Table D.3-5 includes an inhalation slope factor for tetrachloroethane, a volatile contaminant, which suggests that inhalation of volatiles is a viable pathway. U.S. DOE should clarify whether inhalation of volatiles is a viable pathway and provide justification for this determination.

Commenting Organization: U.S. EPA Commentor: Saric Section #: D.7.0 Page #: NA Line #: NA Original Specific Comment #: 174 (U.S. EPA Comment #7) Comment: The original comment requests that the tables in Attachment I be numbered and that the text of Appendix D be revised to include references to these tables. In response, U.S. DOE has numbered the tables and included a single, general reference to Attachment I in Section D.7.0. response is insufficient. Each summary table in Section D.7.0 should include a footnote that references the specific section and table(s) in Attachment I from which the information was summarized. In addition, the first page of

Attachment I contains a list of the tables contained in the attachment. These tables are identified by number as "D-I-X," where X is the sequential number of the table. The tables themselves are each identified as "D.I-X". The first page of Attachment I should be revised to identify the tables consistently.

### TECHNICAL REVIEW COMMENTS ON THE DRAFT FINAL OPERABLE UNIT 1 PROPOSED PLAN (REVISION 1)

#### SPECIFIC COMMENT

Commentor: Saric U.S. EPA Commenting Organization: Pg. #: P-2-3 Line #: NA Section #: 2.2 Original Specific Comment #: 187 (U.S. EPA Comment # 1) Comment: In response to the original comment, Figure 2-1 was revised to include the location of Harrison. However, in the revised figure, the difference between the Fernald Environmental Management Project site location and the Fernald community is now unclear, and the communities of Shandon and New Baltimore are excluded from the figure. Figure 2-1 should be revised to clarify the Fernald Environmental Management Project site location in relation to the Fernald community, as well as show all communities referenced in the paragraph beginning on Page P-2-2, Line 6, of the draft final proposed plan.

### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE: July 25, 1994

SUBJECT: Review of the Draft Feasibility Study Report for Operable Unit 1, Fernald Environmental Management Project (FEMP), Fernald, OH, March 1994

FROM: Pat Van Leeuwen, Toxicologist Technical Support Unit

TO: Jim Saric

Project Manager

I participated in a teleconference with the FERMCO folks, lead by Randy Janke, on Wednesday, July 20, 1994, to discuss the "Response to EPA Comments, Operable Unit 1 Draft Feasibility Study" for the Fernald Environmental Management Project (FEMP), dated 7/14/94. All of the proposed changes are acceptable and the FS report should be ready for approval with their incorporation.

If you have any questions on these comments or any section of the risk assessment, please contact me at 886-4904.

Comment 79 (1) Page 2-20, lines 14-18
Comment 82 (4) Problems with PRG/PRL terminilogy/
section 2

All proposed changes indicated under the action for comment #79 and #82 are acceptable.

Comment 80 (2) Page 2-21. line 22

All proposed changes indicated under the action for this comment are acceptable.

Comment (3) Page 2-21, old line 5

This comment was discussed at the Fernald Operable
Unit 1 RI/FS Meeting on June 8, 1994. It was determined the
change was due to an initial text error.

Comment (5) Page D-4-3, para. 1

The issue of dermal exposure from contact carcinogens, such as PAHs, was resolved at the June 8, 1994 meeting with FERMCO.

-6) Beryllium

I have reviewed the IRIS database for beryllium, and can find no evidence that the administered dose was adjusted for absorption in the calculation of the RfD and Cancer Slope Factors. Therefore, I have recommended that the dermal absorption value of 1% provided by ECAO, Cincinnati for beryllium be used, and that the toxicity values for the administered dose be used for the dermal pathways. This should resolve the apparent calculation problem for beryllium.